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Chief, R&D Branch

Chief, R&D Laboratory

1 April 1959

Project 2510, IN-1, Cost Comparison of Investment Casting vs. Machining from Wrought Stock

1. The following paragraphs compare the cost of investment casting the IN-1 parts with an estimate of the cost of machining these parts from wrought stock in the R&D Laboratory.

2. Three pieces are required if they are machine processed, while only two will be necessary if they are cast.

3. A rate of $3.50 per man-hour is used to figure machining cost as this is approximately the average wage rate of the Mechanical Laboratory.

4. The casting costs are as per quotations received from the Arwood Precision Casting Corporation. The entire tooling and casting costs are included in these quotations.

5. The following cost table shows the estimated complete cost for both methods of manufacture:

Complete Machining from Wrought Stock

Material Costs, Pt. #2510-2, 2510-30 and 2510-31		12 ea.		$ 60.00
Labor Costs:	Pt. #2510-2	12 ea.	142 hrs. @ 3.50/hr.	497.00
	Pt. #2510-30	12 ea.	195 hrs. @ 3.50/hr.	682.50
	Pt. #2510-31	12 ea.	16 hrs. @ 3.50/hr.	56.00
				$1295.50

Investment Casting and Machining

Pt. #2510-2A Casting - Est. #55757	
Tooling	420.00
Prod. 12 ea. @ 4.40/casting	52.80
Machining 12 ea. 34 hrs. @ 3.50/hr.	119.00
Pt. #2510-30A Casting - Est. #55756	
Tooling	485.00
Prod. 12 ea. @ 7.65/casting	91.80
Machining 12 ea. 14 hrs. @ 3.50/hr.	49.00
	$1217.60

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6. The use of investment castings would require an estimated 48 hours of machining in the Mechanical Laboratory while complete machining from wrought stock would require an estimated 353 hours of machining time. Thus, an estimated 300 hours of labor and machine time can be diverted to other projects if investment casting is used.

Attachments:
Arwood Estimates #55757 and #55756

25X1

Lab/DLC/rkb (1 April 1959)

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